# STIC Search Report
## Biotech-Chem Library

STIC Database Tracking Number: 135362

TO: Changhwa Cheu
Location: rem/3c61/3c70
Art Unit: 1641
Thursday, October 28, 2004

Case Serial Number: 09/747467

From: Alex Waclawiw
Location: Biotech-Chem Library
Rem 1A71
Phone: 272-2534

Alexandra.waclawiw@uspto.gov

## Search Notes

12/22/2000

Agis

Access DB# 135362

RECEIVED
OCT 19 20
(STIC)

# SEARCH REQUEST FORM

**Scientific and Technical Information Center**

Requester's Full Name: Changhun Jacob Choi Examiner #: 79793 Date: 10/18/2004
Art Unit: 1641 Phone Number 30[illegible] 272-0814 Serial Number: 09/747,467
Mail Box and Bldg/Room Location: 3C61 Results Format Preferred (circle): PAPER DISK E-MAIL

**If more than one search is submitted, please prioritize searches in order of need.** 1 of 1
**********

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

_____

Earliest Priority Filing Date: _____

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

Plea Seah Claim #1,

a. Ab
b. protected nucleotide
c: structure

Thanks.

RECEIVED
OCT 19 20
(STIC)

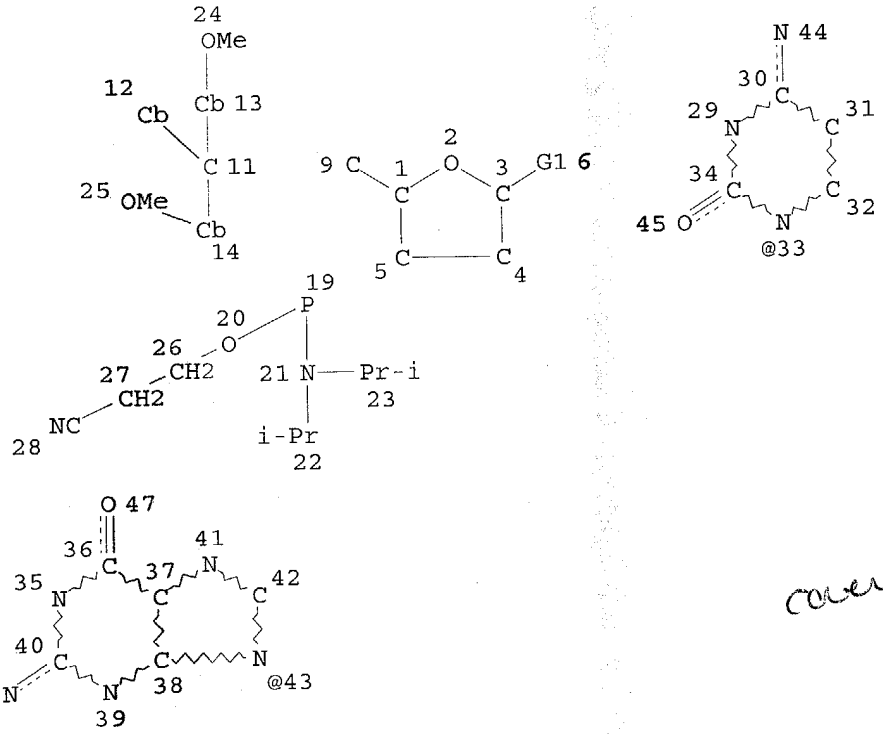
**********

| STAFF USE ONLY | | Type of Search | | Vendors and cost where applicable | |
|---|---|---|---|---|---|
| Searcher: | Alexa Waclawiw | NA Sequence (#) | | STN | 8455 |
| Searcher Phone #: | Technical Info. Specialist CM1 6/32 Tel: 308-4191 | AA Sequence (#) | | Dialog | |
| Searcher Location: | | Structure (#) | 1 | Questel/Orbit | |
| Date Searcher Picked Up: | 10-28-04 | Bibliographic | | Dr.Link | |
| Date Completed: | 10-28-04 | Litigation | | Lexis/Nexis | |
| Searcher Prep & Review Time: | 27 | Fulltext | | Sequence Systems | |
| Clerical Prep Time: | | Patent Family | | WWW/Internet | |
| Online Time: | 39 | Other | | Other (specify) | |

PTO-1590 (8-01)

```
=> d his

     (FILE 'CAPLUS' ENTERED AT      :04 ON 28 OCT 2004)
               DEL HIS Y

     FILE 'REGISTRY' ENTERED AT     2:52 ON 28 OCT 2004
               ACT CHEU3/A
              ---------
L1             STR
L2           717 SEA FILE=REGIST     S FUL L1
              ---------

     FILE 'CAPLUS' ENTERED AT 1     05 ON 28 OCT 2004
L3           851 S L2
L4        215471 S ANTIBOD?
L5            15 S L3 AND L4
L6         11311 S PROTECT? (L)      #
L7             2 S L5 AND L6
L8            13 S L5 NOT L7

     FILE 'REGISTRY' ENTERED AT     1:34 ON 28 OCT 2004
```

```
=> fil reg
FILE 'REGISTRY' ENTERED AT 12:11:48 ON 28 OCT 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   27 OCT 2004  HIGHEST RN 770693-70-4
DICTIONARY FILE UPDATES:  27 OCT 2004  HIGHEST RN 770693-70-4

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d que stat l2
L1                  STR
```




covers structures in specifications

```
VAR G1=33/43
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT    IS MCY  UNS  AT  12
GGCAT    IS MCY  UNS  AT  13
```

```
GGCAT   IS MCY  UNS  AT  14
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS E6 C  AT  12
ECOUNT  IS E6 C  AT  13
ECOUNT  IS E6 C  AT  14

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  40

STEREO ATTRIBUTES: NONE
L2          717 SEA FILE=REGISTRY SSS FUL L1

100.0% PROCESSED   1163 ITERATIONS                          717 ANSWERS
SEARCH TIME: 00.00.01


=> fil caplus
FILE 'CAPLUS' ENTERED AT 12:11:52 ON 28 OCT 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)


Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.
The CA Lexicon is the copyrighted intellectual property of the
American Chemical Society and is provided to assist you in searching
databases on STN.  Any dissemination, distribution, copying, or storing
of this information, without the prior written consent of CAS, is
strictly prohibited.

FILE COVERS 1907 - 28 Oct 2004  VOL 141 ISS 18
FILE LAST UPDATED: 27 Oct 2004  (20041027/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

=> d que nos l7
L1              STR
L2          717 SEA FILE=REGISTRY SSS FUL L1
L3          851 SEA FILE=CAPLUS ABB=ON  PLU=ON  L2
L4       215471 SEA FILE=CAPLUS ABB=ON  PLU=ON  ANTIBOD?/OBI
L5           15 SEA FILE=CAPLUS ABB=ON  PLU=ON  L3 AND L4
L6        11311 SEA FILE=CAPLUS ABB=ON  PLU=ON  PROTECT?/OBI (L) GROUP#/OBI
L7            2 SEA FILE=CAPLUS ABB=ON  PLU=ON  L5 AND L6


=> d que nos l8
L1              STR
L2          717 SEA FILE=REGISTRY SSS FUL L1
L3          851 SEA FILE=CAPLUS ABB=ON  PLU=ON  L2
L4       215471 SEA FILE=CAPLUS ABB=ON  PLU=ON  ANTIBOD?/OBI
L5           15 SEA FILE=CAPLUS ABB=ON  PLU=ON  L3 AND L4
L6        11311 SEA FILE=CAPLUS ABB=ON  PLU=ON  PROTECT?/OBI (L) GROUP#/OBI
```

```
L7              2 SEA FILE=CAPLUS ABB=ON  PLU=ON  L5 AND L6
L8             13 SEA FILE=CAPLUS ABB=ON  PLU=ON  L5 NOT L7


=> d .ca hitstr l7 1-2;d .ca hitstr l8 1-13

L7   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2003:23110  CAPLUS
DOCUMENT NUMBER:          138:86112
TITLE:                    Use of antibody microarrays for detecting
                          and purifying incompletely deprotected syntheti
                          oligonucleotides
INVENTOR(S):              Pearce, Christopher D. J.; Mitchell, Lloyd G.
PATENT ASSIGNEE(S):       Veri-Q, Inc., USA; Proteome Sciences PLC
SOURCE:                   PCT Int. Appl., 65 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
     ---------------      ----   --------    -------------------      -----
     WO 2003003014         A1    20030109    WO 2002-US20418          20020
     WO 2003003014         C2    20040513
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT,
             UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD,
             TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE,
             CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
     EP 1412752            A1    20040428    EP 2002-747993           20020
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     US 2004185476         A1    20040923    US 2003-746430           20031
PRIORITY APPLN. INFO.:                       US 2001-302153P      P   20010
                                             WO 2002-US20418      W   20020

OTHER SOURCE(S):          MARPAT 138:86112
AB   An antibody microarray is described comprising a plurality of antib
     immobilized on a substrate, wherein each antibody specifically bind
     synthetic oligomer (e.g., an oligonucleotide or oligopeptide) havin
     organic protecting group covalently bound thereto, which antibody d
     bind to that synthetic oligomer when the organic protecting group i
     covalently bound thereto.  Methods of making and using such antibod
     disclosed, along with cells for making such antibodies.  Methods of
     and using such antibody microarrays are also disclosed.
IC   ICM  G01N033-543
     ICS  C07H021-00; C07H021-02; C07H021-04; C12Q001-68; C12P019-34
CC   9-10 (Biochemical Methods)
     Section cross-reference(s): 33
ST   antibody microarray synthetic oligonucleotides
     protecting group removal purifn detn
IT   Protein microarray technology
        (antibody microarray; use of antibody microarrays
        for detecting and purifying incompletely deprotected synthetic
        oligonucleotides)
```

IT **Protective groups**
(benzoyl; use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)
IT **Protective groups**
(deprotection; use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)
IT **Protective groups**
(dimethoxytrityl; use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)
IT **Protective groups**
(dimethylformamidine; use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)
IT Immunoassay
(enzyme-linked immunosorbent assay; use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)
IT Immunization
(for **antibody** preparation; use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)
IT Immunoassay
(immunoblotting; use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)
IT **Protective groups**
(isobutyryl; use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)
IT **Protective groups**
(isopropyl-phenoxyacetyl; use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)
IT Dyes
Fluorescent substances
(label for **antibody**; use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)
IT Enzymes, uses
Radionuclides, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(label for **antibody**; use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)
IT **Antibodies** and Immunoglobulins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(microarray; use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)
IT **Protective groups**
(phenoxyacetyl; use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)
IT **Protective groups**
(tert-butyldimethylsilyl; use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)
IT Acetyl group
Immobilization, molecular or cellular
Immunoassay
(use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)
IT Nucleic acids
Oligonucleotides

RL: ANT (Analyte); PUR (Purification or recovery); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)

IT **Protective groups**
(β-cyanoethylp; use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)

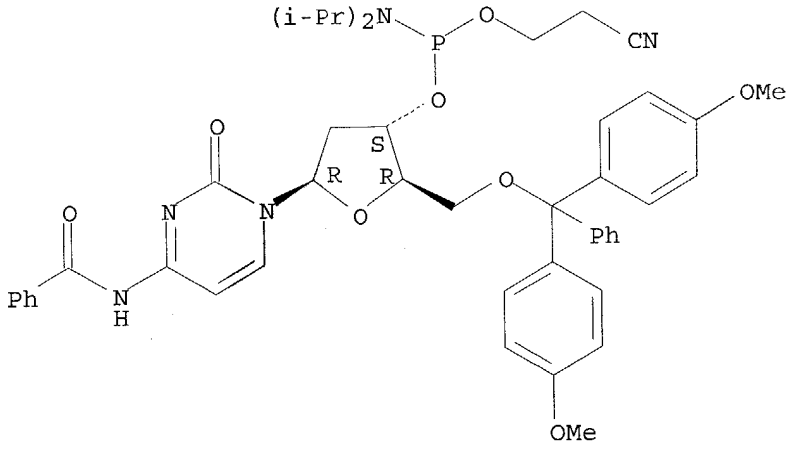
IT 110-15-6, Succinic acid, biological studies **102212-98-6D**, reaction with succinyl linker 110543-74-3D, reaction with cytidyl and guanosyl analogs **149559-87-5D**, reaction with cytidyl and guanidyl analogs **150065-82-0D**, reaction with cytidyl analogs **154110-40-4D**, reaction with guanidyl and cytidyl analogs
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(immunogen; use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)

IT 58-85-5, Biotin
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(label for **antibody**; use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)

IT **102212-98-6D**, reaction with succinyl linker **149559-87-5D**, reaction with cytidyl and guanidyl analogs **150065-82-0D**, reaction with cytidyl analogs **154110-40-4D**, reaction with guanidyl and cytidyl analogs
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(immunogen; use of **antibody** microarrays for detecting and purifying incompletely deprotected synthetic oligonucleotides)

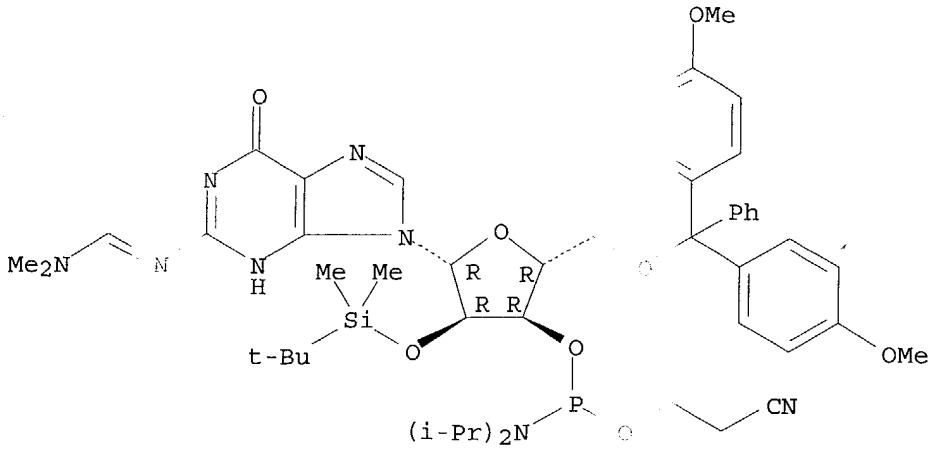
RN 102212-98-6 CAPLUS
CN Cytidine, N-benzoyl-5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-deoxy-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.




RN 149559-87-5 CAPLUS
CN Guanosine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-N-[(dimethylamino)methylene]-2'-O-[(1,1-dimethylethyl)dimethylsilyl]-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

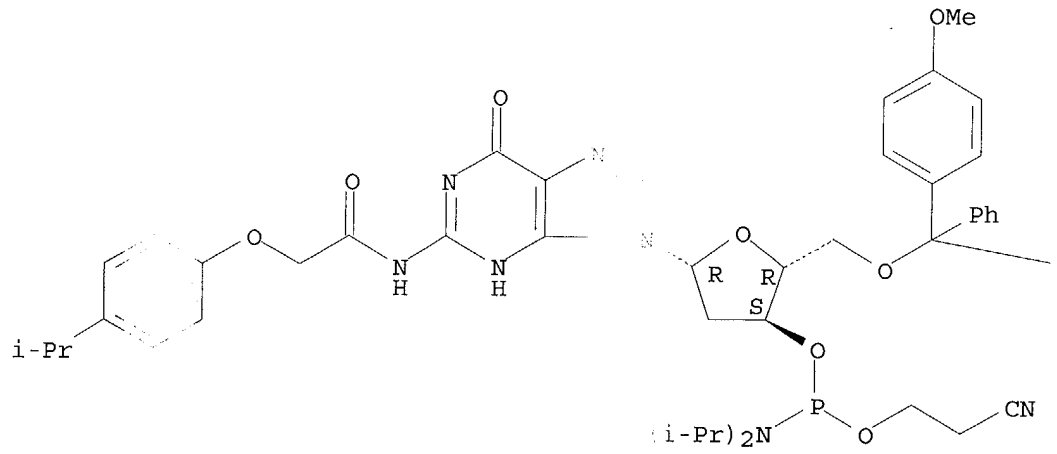
Absolute stereochemistry.
Double bond geometry unknown.

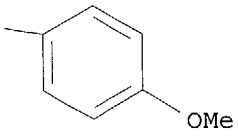


RN 150065-82-0 CAPLUS
CN Guanosine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-deoxy-N-[(1-methylethyl)phenoxy]acetyl]-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.

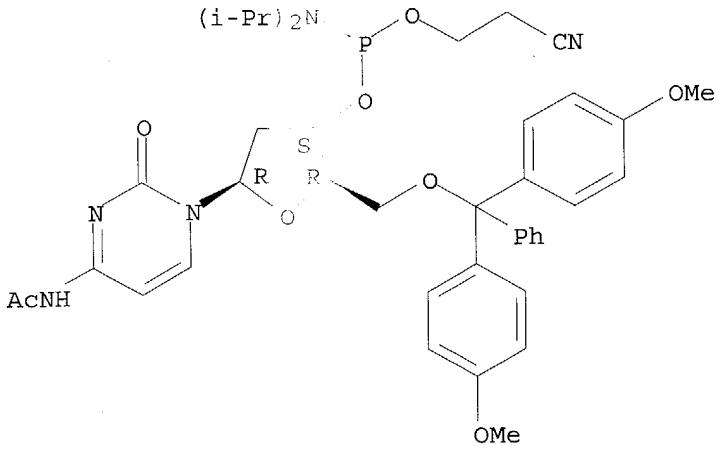
PAGE 1-A






RN 154110-40-4 CAPLUS
CN Cytidine, N-acetyl-5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-deoxy-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.




REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:457413 CAPLUS
DOCUMENT NUMBER: 138:250957
TITLE: Identification and quantification of **protecting groups** remaining in commercial oligonucleotide products using monoclonal **antibodies**
AUTHOR(S): Fu, Chi; Smith, Susanna; Simkins, Stephen G.; Agris, Paul F.
CORPORATE SOURCE: Department of Molecular and Structural Biochemistry, North Carolina State University, Raleigh, NC, 27695, USA
SOURCE: Analytical Biochemistry (2002), 306(1), 135-143
CODEN: ANBCA2; ISSN: 0003-2697
PUBLISHER: Elsevier Science

DOCUMENT TYPE: Journal
LANGUAGE: English

AB Quality control is paramount to reproducibly achieving oligonucleotide therapeutics and diagnostics of superior value. However, incomplete deprotection of nucleoside reactive groups after the automated chemical synthesis of oligonucleotides would result in diminished antisense activity and in erroneous array anal. of gene expression. Mass spectrometry and capillary electrophoresis are used to detect aborted sequences of oligonucleotides, but not to identify and quantify incompletely deprotected oligonucleotides. To address this problem, monoclonal antibodies (MAbs), ELISA, and dot-blot assays were developed for the specific identification and quantification of the commonly used nucleic acid base- and sugar-protecting groups: benzoyl, isobutyryl, isopropylphenoxyacetyl, and dimethoxytrityl. Each MAb was capable of reproducibly detecting 8-32 pmol of the resp. protected nucleoside in an intact DNA or RNA sample composed of 320-640 nmol of the deprotected nucleoside. In a direct comparison, HPLC nucleoside composition anal. of enzyme-hydrolyzed DNA was limited to the detection of 2-5 nmol of protected nucleoside. Using the MAb dot-blot assay, 5 of 16 com. DNA products obtained from 8 different companies were found to have 1.0-5.2% of the benzoyl and isopropylphenoxyacetyl protecting groups remaining. Thus, MAbs selectively identify and quantify picomoles of remaining protecting groups on antisense therapeutics and oligonucleotide diagnostics.

CC 9-10 (Biochemical Methods)
Section cross-reference(s): 3, 6, 33

ST oligonucleotide **protecting group** identification quantification monoclonal **antibody**

IT Immunoassay
(enzyme, dot-blot; identification and quantification of **protecting groups** remaining in com. oligonucleotide products using monoclonal **antibodies**)

IT Immunoassay
(enzyme-linked immunosorbent assay; identification and quantification of **protecting groups** remaining in com. oligonucleotide products using monoclonal **antibodies**)

IT **Protective groups**
Quality control
(identification and quantification of **protecting groups** remaining in com. oligonucleotide products using monoclonal **antibodies**)

IT DNA
Oligonucleotides
RNA
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(modified with **protective groups**; identification and quantification of **protecting groups** remaining in com. oligonucleotide products using monoclonal **antibodies**)

IT **Antibodies** and Immunoglobulins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(monoclonal; identification and quantification of **protecting groups** remaining in com. oligonucleotide products using monoclonal **antibodies**)

IT **93183-15-4** 98796-51-1 98796-53-3 **102212-98-6** **110522-84-4** **150065-82-0** 160107-24-4 502763-74-8
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(identification and quantification of **protecting groups** remaining in com. oligonucleotide products using

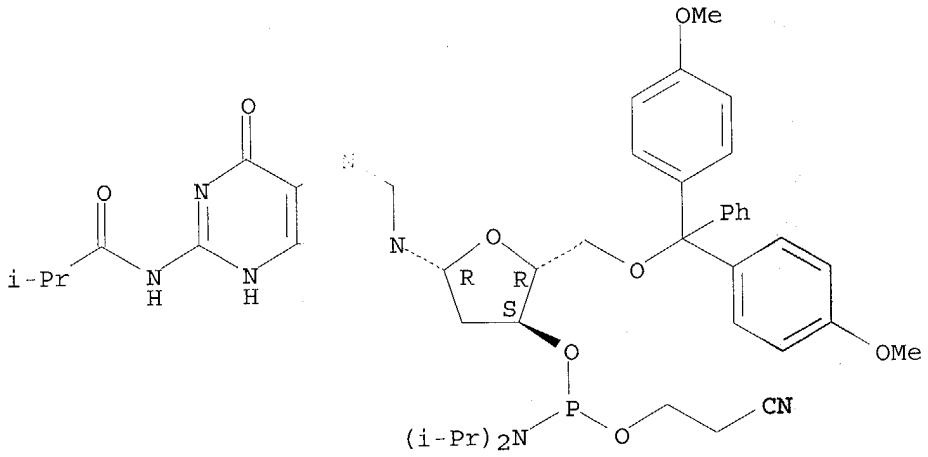
monoclonal antibodies)

IT 1643-16-9 26[illegible]-5, Benzoyl 35586-36-8, Isobutyryl 40615-36-9
RL: ANT (Analysis); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(identification and quantification of **protecting groups** remaining in com. oligonucleotide products using monoclonal antibodies)

IT **93183-15-4 102212-98-6 110522-84-4 150065-82-0**
RL: ANT (Analysis); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(identification and quantification of **protecting groups** remaining in com. oligonucleotide products using monoclonal antibodies)

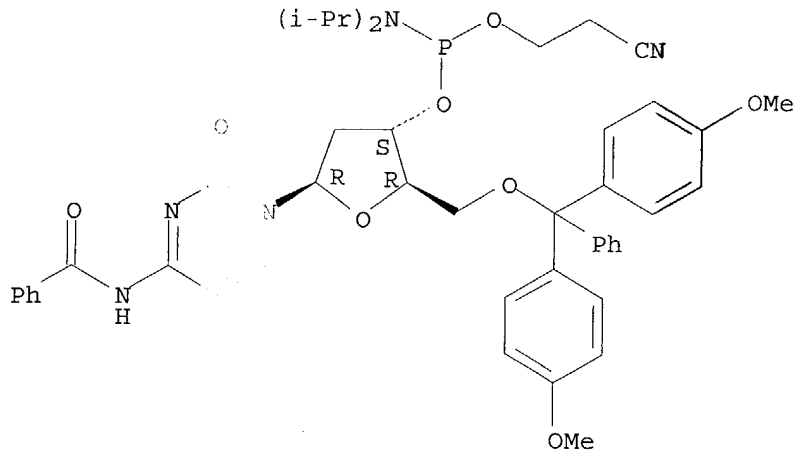
RN 93183-15-4 CAPLUS
CN Guanosine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-deoxy-N-(2-methyl-1-oxopropyl)-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.



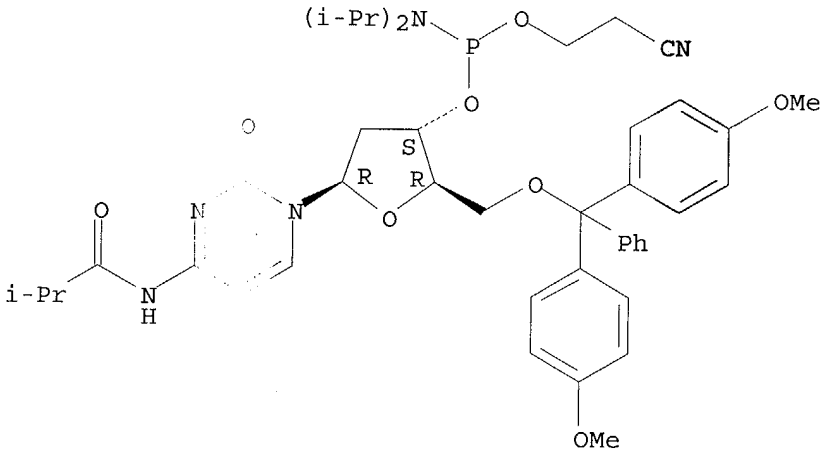

RN 102212-98-6 CAPLUS
CN Cytidine, N-benzoyl-5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-deoxy-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 110522-84-4 CAPLUS
CN Cytidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-deoxy-N-(2-methyl-1-oxopropyl)-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

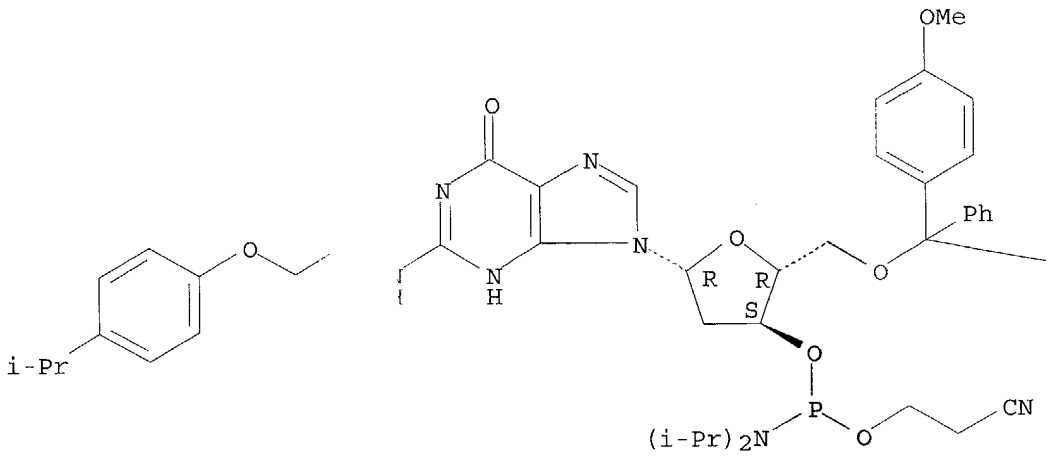
Absolute stereochemistry.



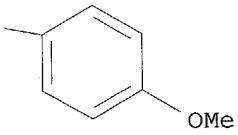
RN 150065-82-0 CAPLUS
CN Guanosine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-deoxy-N-[[4-(1-methylethyl)phenoxy]acetyl]-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A




PAGE 1-B




REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 1 OF 13 S COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 004:414498 CAPLUS
DOCUMENT NUMBER: 40:401332
TITLE: Detection of nucleic acid sequences by hybridization and cleavage of hybrids to release sequences labeled with electrophoretic mobility tags
INVENTOR(S): Chenna, Ahmed; Singh, Sharat
PATENT ASSIGNEE(S): Aclara Biosciences, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 124 pp., Cont.-in-part of U.S. Ser. No. 698,846.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 21
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2004096825 | A1 | 20040520 | US 2001-11201 | 20011109 |
| US 6322980 | B1 | 20011127 | US 1999-303029 | 19990430 |
| US 6682887 | B1 | 20040127 | US 2000-561579 | 20000428 |
| US 6514700 | B1 | 20030204 | US 2000-602586 | 20000621 |
| US 6627400 | B1 | 20030930 | US 2000-698846 | 20001027 |
| WO 2003042658 | A2 | 20030522 | WO 2002-US35893 | 20021108 |
| WO 2003042658 | A3 | 20031204 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

| | | |
|---|---|---|
| US 1999-303029 | A2 | 19990430 |
| US 2000-561579 | A2 | 20000428 |
| US 2000-602586 | A2 | 20000621 |
| US 2000-684386 | B2 | 20001004 |
| US 2000-698846 | A2 | 20001027 |
| US 2001-11201 | A2 | 20011109 |
| US 2001-337982P | P | 20011109 |

AB A method of simultaneously detecting a number of different sequences within a sample using pairs of probes that form a duplex structure when hybridized to the target sequence in the correct orientation is described. One member of the pair of probes is labeled with a tag that has a specific electrophoretic mobility. Cleavage of the duplex structures, e.g., with a restriction enzyme, releases electrophoretic tags that are then separated and identified to indicate the presence or quantity of the target sequences. The present invention is particularly useful in multiplex reactions wherein multiple target sequences are detected in one reaction. Kits useful in the detection of nucleic acids are also provided.

IC ICM C12Q001-68
ICS G01N033-53; G01N033-542
NCL 435006000; 435007900
CC 3-1 (Biochemical Genetics)
IT **Antibodies** and Immunoglobulins
Oligonucleotides
Receptors
Transition metals, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(as modulators of interaction of reporter and ligand; detection of nucleic acid sequences by hybridization and cleavage of hybrids to release sequences labeled with electrophoretic mobility tags)
IT 530159-58-1P **530159-59-2P** 690656-06-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(detection of nucleic acid sequences by hybridization and cleavage of hybrids to release sequences labeled with electrophoretic mobility tags)
IT 64911-18-8P 232946-83-7P 372170-39-3P 372170-40-6P 372170-48-4P **530159-46-7P** 530159-48-9P **690656-05-4P**
RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST

(Analytical study); PREP (Preparation)
(preparation and anal. use of; detection of nucleic acid sequences by hybridization and cleavage of hybrids to release sequences labeled with electrophoretic mobility tags)

IT 14985-44-5P, 8-Bromo-2'-deoxyadenosine 372170-41-7P **530159-50-3P**
RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(preparation and reactions of; detection of nucleic acid sequences by hybridization and cleavage of hybrids to release sequences labeled with electrophoretic mobility tags)

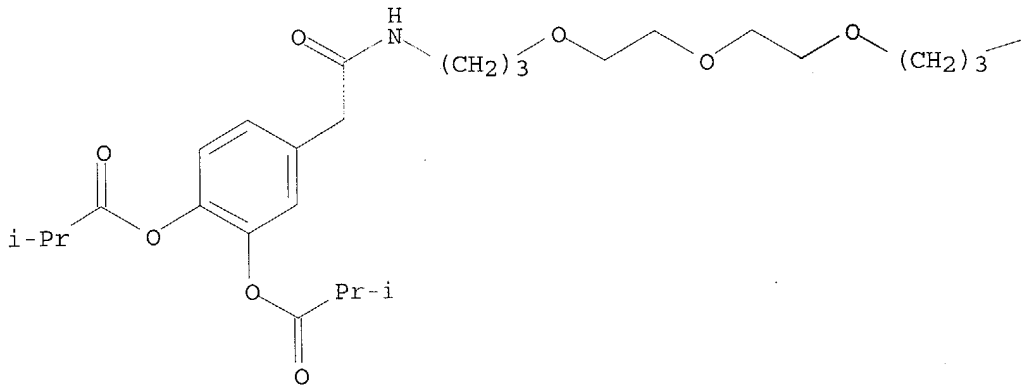
IT **530159-59-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(detection of nucleic acid sequences by hybridization and cleavage of hybrids to release sequences labeled with electrophoretic mobility tags)

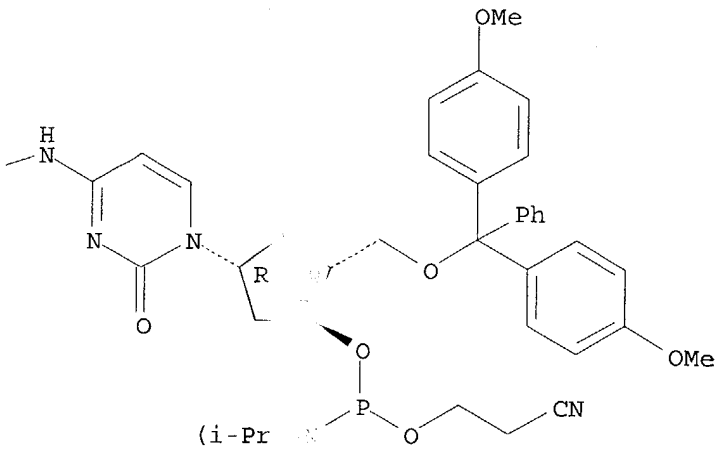
RN 530159-59-2 CAPLUS

CN Cytidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-N-[16-[3,4-bis(2-methyl-1-oxopropoxy)phenyl]-15-oxo-4,7,10-trioxa-14-azahexadec-1-yl]-2'-deoxy-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A





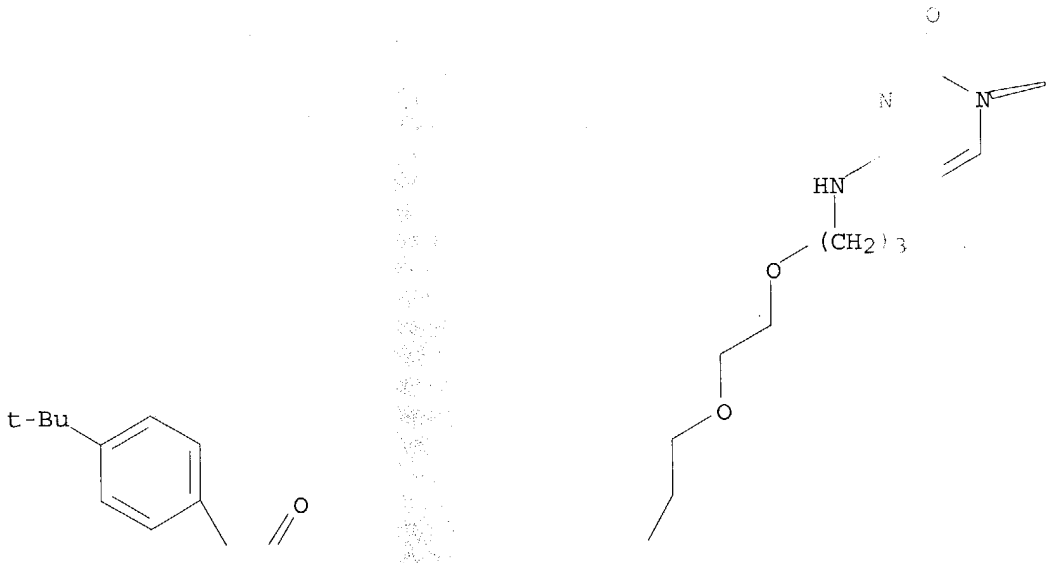

IT **530159-46-7P 690656-05-4P**
RL: ARU (Analytical role, unclassified); **SPN** (Synthetic preparation); **ANST** (Analytical study); PREP (Preparation)
(preparation and anal. use of; detection of nucleic acid sequences by hybridization and cleavage of hybrids to release sequences labeled with electrophoretic mobility tags)

RN 530159-46-7 CAPLUS

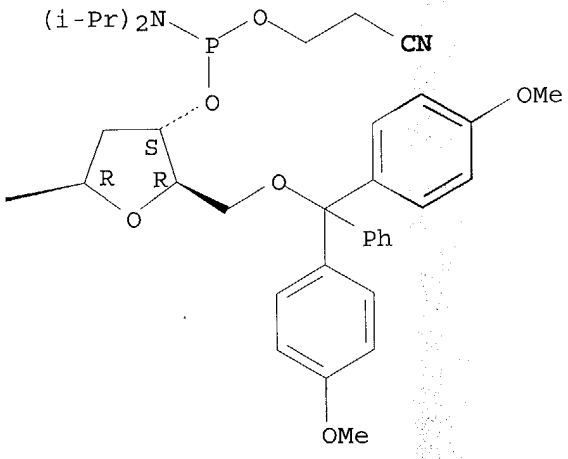
CN Cytidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-deoxy-N-[19-[(3aS,4S,6aR)-1-[4-(1,1-dimethylethyl)benzoyl]hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-15-oxo-4,7,10-trioxa-14-azanonadec-1-yl]-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.

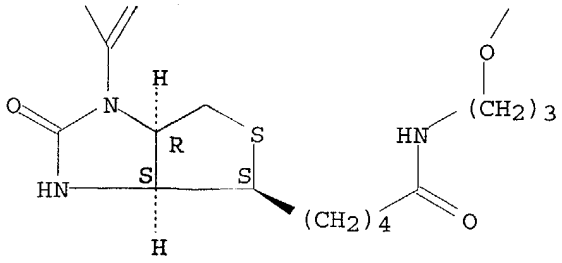
PAGE 1-A




PAGE 1-B



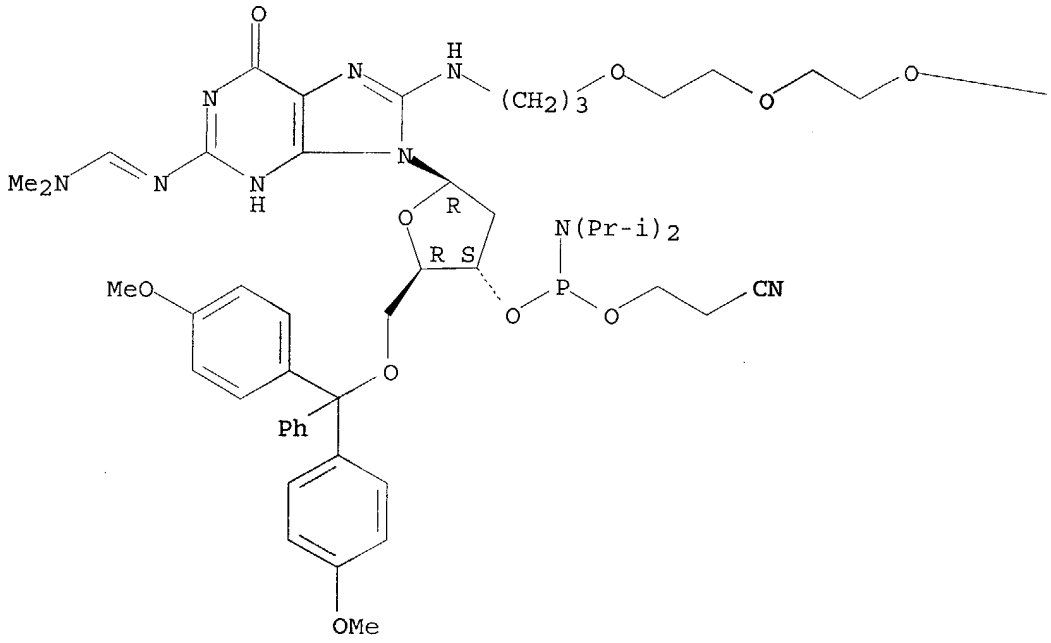
PAGE 2-A



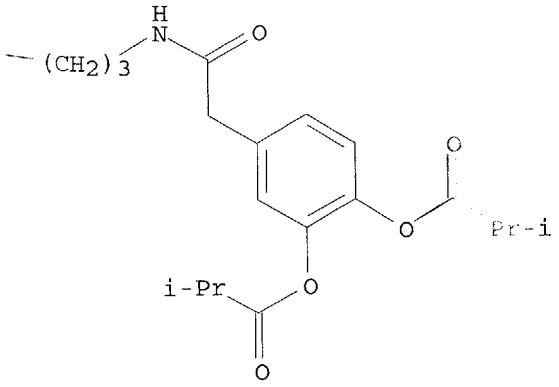
RN 690656-05-4 CAPLUS
CN Guanosine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-8-[[16-[3,4-bis(2-methyl-1-oxopropoxy)phenyl]-15-oxo-4,7,10-trioxa-14-azahexadec-1-yl]amino]-2'-deoxy-N-[(dimethylamino)methylene]-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



PAGE 1-B



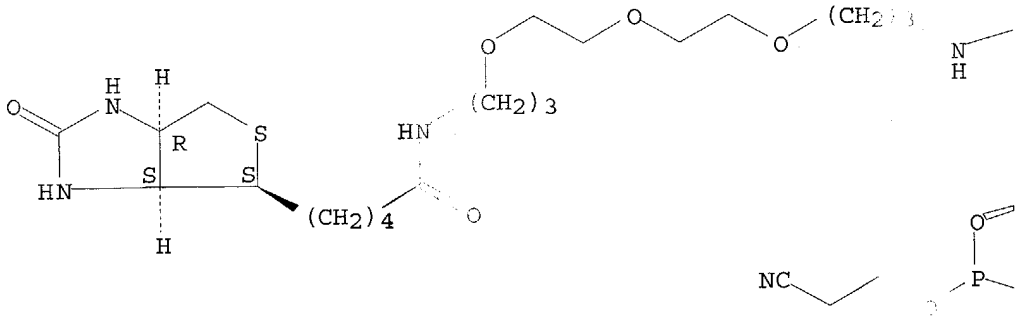
IT **530159-50-3P**
RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(preparation and reactions of; detection of nucleic acid sequences by hybridization and cleavage of hybrids to release sequences labeled with electrophoretic mobility tags)

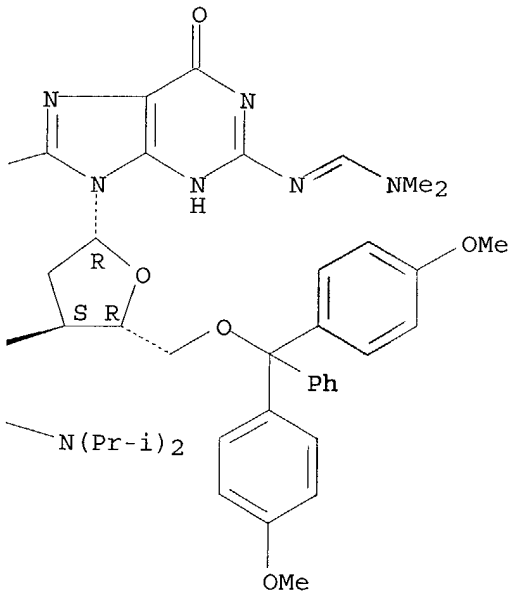
RN 530159-50-3 CAPLUS

CN Guanosine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-deoxy-N-[(dimethylamino)methylene]-8-[[19-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-15-oxo-4,7,10-trioxa-14-azanonadec-1-yl]amino]-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A






L8 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:769075 CAPLUS
DOCUMENT NUMBER: 139:256257
TITLE: Multiplexed measurement of membrane protein populations
INVENTOR(S): Singh, Sharat; Matray, Tracy
PATENT ASSIGNEE(S): Aclara Biosciences, Inc., USA
SOURCE: U.S., 67 pp., Cont.-in-part of U.S. Ser. No. 602,586.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 21
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 6627400 | B1 | 20030930 | US 2000-698846 | 20001027 |
| US 6322980 | B1 | 20011127 | US 1999-303029 | 19990430 |
| US 6682887 | B1 | 20040127 | US 2000-561579 | 20000428 |
| US 6514700 | B1 | 20030204 | US 2000-602586 | 20000621 |
| US 2001049105 | A1 | 20011206 | US 2001-824984 | 20010402 |
| US 2001051340 | A1 | 20011213 | US 2001-824851 | 20010402 |
| US 2002001808 | A1 | 20020103 | US 2001-825247 | 20010402 |
| US 6686152 | B2 | 20040203 | | |
| US 2002009737 | A1 | 20020124 | US 2001-824905 | 20010402 |
| US 2002015954 | A1 | 20020207 | US 2001-825246 | 20010402 |
| US 2002045738 | A1 | 20020418 | US 2001-825245 | 20010402 |
| US 2002090616 | A1 | 20020711 | US 2001-825244 | 20010402 |
| US 6770439 | B2 | 20040803 | | |
| US 2002142329 | A1 | 20021003 | US 2001-8573 | 20011109 |
| US 2002146726 | A1 | 20021010 | US 2001-8495 | 20011109 |
| US 6673550 | B2 | 20040106 | | |
| US 2002150927 | A1 | 20021017 | US 2001-8593 | 20011109 |

| | | | | | |
|---|---|---|---|---|---|
| US 6649351 | B2 | 20031118 | | | |
| US 2004096825 | A1 | 20040520 | US 2001-11201 | | 20011109 |
| US 2003134333 | A1 | 20030717 | US 2002-290575 | | 20021108 |
| US 2003235832 | A1 | 20031225 | US 2002-290613 | | 20021108 |
| US 2003207300 | A1 | 20031106 | US 2003-338729 | | 20030107 |
| US 2003170734 | A1 | 20030911 | US 2003-405374 | | 20030401 |
| US 2004063114 | A1 | 20040401 | US 2003-420549 | | 20030418 |
| US 2004166529 | A1 | 20040826 | US 2004-828647 | | 20040421 |
| US 2004197815 | A1 | 20041007 | US 2004-830544 | | 20040422 |
| RITY APPLN. INFO.: | | | US 1999-303029 | A2 | 19990430 |
| | | | US 2000-561579 | B2 | 20000428 |
| | | | US 2000-602586 | A2 | 20000621 |
| | | | US 2000-684386 | A1 | 20001004 |
| | | | US 2000-698846 | A1 | 20001027 |
| | | | US 2001-825244 | A1 | 20010402 |
| | | | US 2001-10949 | A2 | 20011109 |
| | | | US 2001-337768P | P | 20011109 |
| | | | US 2002-369652P | P | 20020402 |
| | | | US 2002-154042 | A2 | 20020521 |
| | | | US 2003-420549 | A1 | 20030418 |

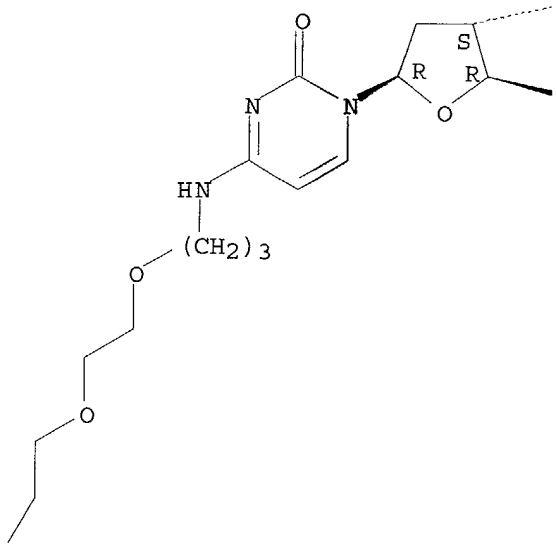
Families of compns. are provided as labels, referred to as eTag reporters for attaching to polymeric compds. and assaying based on release of the eTag reporters from the polymeric compound and separation and detection. For oligonucleotides, the eTag reporters are synthesized at the end of the oligonucleotide by using phosphite or phosphate chemical, whereby mass-modifying regions, charge-modifying regions and detectable regions are added sequentially to produce the eTag labeled reporters. By using small building blocks and varying their combination large nos. of different eTag reporters can be readily produced attached to a binding compound specific for the target compound of interest for identification. Protocols are used that release the eTag reporter when the target compound is present in the sample.

ICM C12Q001-68
ICS G01N033-53
435006000; 435007100; 435007200; 435007700; 435007720; 435007950
3-1 (Biochemical Genetics)
Section cross-reference(s): 9
**Antibodies** and Immunoglobulins
Ligands
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(eTag-labeled; eTag reporter compds. for oligonucleotide and protein labeling and identification)
14985-44-5P, 8-Bromo-2'-deoxyadenosine 64911-18-8P 129451-79-2P
183601-38-9P 197925-39-6P 232946-83-7P 372170-39-3P 372170-40-6P
372170-41-7P 372170-42-8P **372170-43-9P** 372170-44-0P
372170-45-1P 372170-46-2P 372170-47-3P 372170-48-4P 372489-37-7P
372489-38-8P 372489-39-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(eTag reporter compds. for oligonucleotide and protein labeling and identification)
**372170-43-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(eTag reporter compds. for oligonucleotide and protein labeling and identification)
372170-43-9 CAPLUS
Cytidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-deoxy-N-[19-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-15-oxo-4,7,10-trioxa-14-azanondec-1-yl]-, 3'-[2-cyanoethyl bis(1-

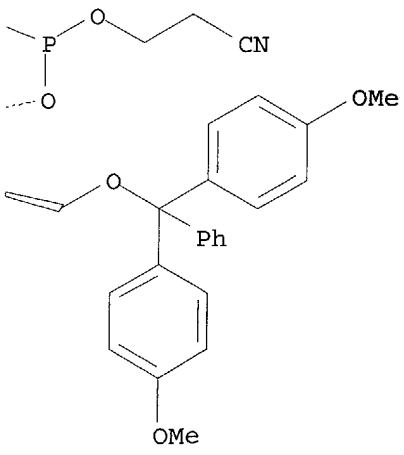
methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

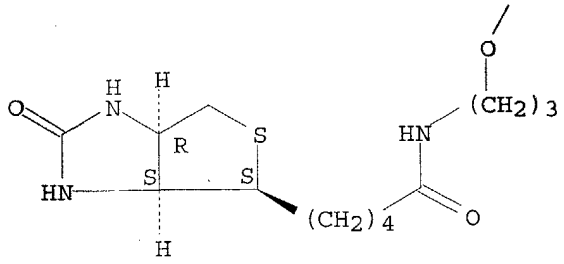
Absolute stereochemistry.

PAGE 1-A




PAGE 1-B





REFERENCE COUNT: 101 THERE ARE 101 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

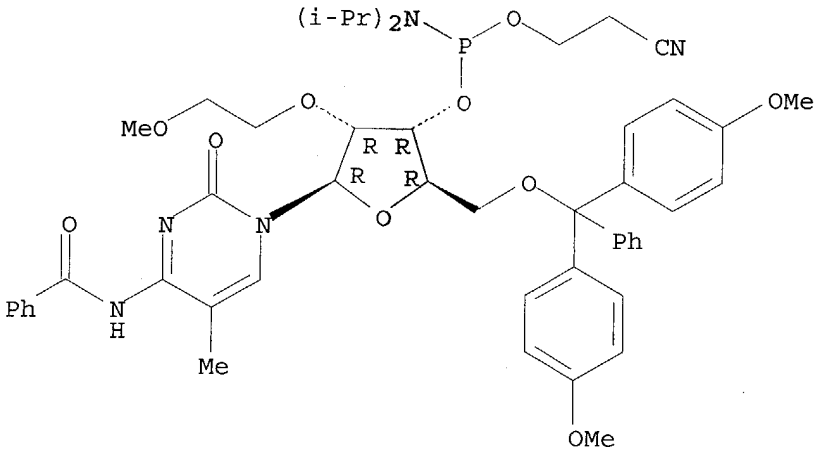
L8 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:757470 CAPLUS
DOCUMENT NUMBER: 139:255337
TITLE: Antisense oligonucleotides as Jagged 2 inhibitors for inducing apoptosis in cancer treatment
INVENTOR(S): Koller, Erich; Shapard, Peter J.
PATENT ASSIGNEE(S): Isis Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 148 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2003077848 | A2 | 20030925 | WO 2003-US7340 | 20030310 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 2003185829 | A1 | 20031002 | US 2002-96399 | 20020312 |
| PRIORITY APPLN. INFO.: | | | US 2002-96399 A | 20020312 |

AB The invention provides methods for inducing apoptosis and for treating conditions associated with insufficient apoptosis, particularly hyperproliferative conditions like cancer. These methods are based on the novel observation that inhibition of Jagged 2 induces apoptosis and causes cell death.
IC ICM A61K
CC 1-6 (Pharmacology)
IT **Antibodies** and Immunoglobulins
Antisense oligonucleotides
Nucleic acids
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antisense oligonucleotides as Jagged 2 inhibitors for inducing

apoptosis in cancer treatment)
IT **163759-94-2P** 212061-30-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(antisense oligonucleotides as Jagged 2 inhibitors for inducing apoptosis in cancer treatment)
IT **163759-94-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(antisense oligonucleotides as Jagged 2 inhibitors for inducing apoptosis in cancer treatment)
RN 163759-94-2 CAPLUS
CN Cytidine, N-benzoyl-5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-O-(2-methoxyethyl)-5-methyl-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L8 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:473154 CAPLUS
DOCUMENT NUMBER: 139:47121
TITLE: Antisense modulation of CD81 expression for treatment of inflammation and infections
INVENTOR(S): Graham, Mark J.; Dobie, Kenneth
PATENT ASSIGNEE(S): Isis Pharmaceuticals, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 55 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2003113914 | A1 | 20030619 | US 2001-6430 | 20011210 |
| WO 2003053342 | A2 | 20030703 | WO 2002-US39182 | 20021209 |
| WO 2003053342 | A3 | 20040304 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1461461 A2 20040929 EP 2002-805551 20021209

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

PRIORITY APPLN. INFO.: US 2001-6430 A 20011210

WO 2002-US39182 W 20021209

AB Antisense compds., compns. and methods are provided for modulating the expression of CD81. The compns. comprise antisense compds., particularly antisense oligonucleotides, targeted to nucleic acids encoding CD81. Methods of using these compds. for modulation of CD81 expression and for treatment of diseases associated with expression of CD81 are provided.

IC ICM A61K048-00
ICS C07H021-04; C12N005-00

NCL 435375000; 514044000; 536023200

CC 1-5 (Pharmacology)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study) (TAPA-1 (target of antiproliferative **antibody**, 1); antisense modulation of CD81 expression for treatment of inflammation and infections)

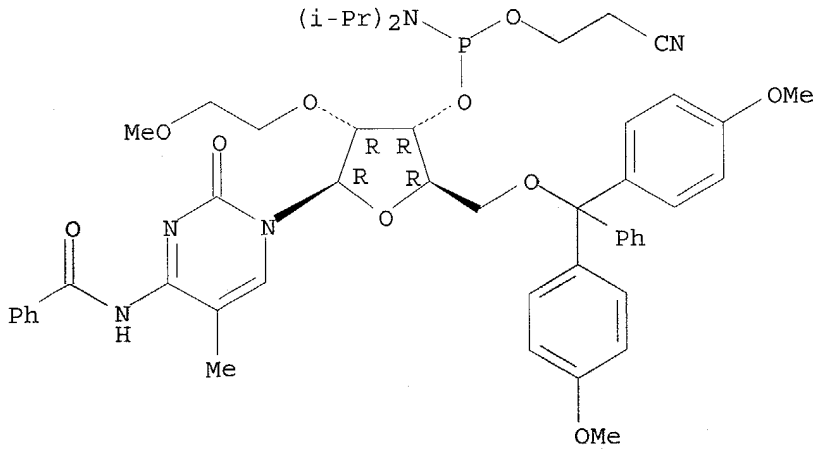
IT **163759-94-2P** 212061-30-8P
RL: SPN (Synthetic preparation); PREP (Preparation) (antisense modulation of CD81 expression for treatment of inflammation and infections)

IT **163759-94-2P**
RL: SPN (Synthetic preparation); PREP (Preparation) (antisense modulation of CD81 expression for treatment of inflammation and infections)

RN 163759-94-2 CAPLUS

CN Cytidine, N-benzoyl-5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-O-(2-methoxyethyl)-5-methyl-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L8 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:397081 CAPLUS

DOCUMENT NUMBER: 138:397219

TITLE: Detection of nucleic acid sequences by hybridization and cleavage of hybrids to release sequences labeled with affinity and electrophoretic mobility tags
INVENTOR(S): Chenna, Ahmed; Singh, Sharat
PATENT ASSIGNEE(S): Aclara Biosciences, Inc., USA
SOURCE: PCT Int. Appl., 200 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 21
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2003042658 | A2 | 20030522 | WO 2002-US35893 | 20021108 |
| WO 2003042658 | A3 | 20031204 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 2004096825 | A1 | 20040520 | US 2001-11201 | 20011109 |
| PRIORITY APPLN. INFO.: | | | US 2001-11201 A2 | 20011109 |
| | | | US 2001-337982P P | 20011109 |
| | | | US 1999-303029 A2 | 19990430 |
| | | | US 2000-561579 A2 | 20000428 |
| | | | US 2000-602586 A2 | 20000621 |
| | | | US 2000-684386 B2 | 20001004 |
| | | | US 2000-698846 A2 | 20001027 |

OTHER SOURCE(S): MARPAT 138:397219

AB Probe sets for the simultaneous detection of multiple sequences in a complex nucleic acid sample are described. The method uses pairs of probes that will hybridize to one another to form a cleavable structure when their target sequences are in a defined relationship. Cleavage of the structure releases a sequence that includes a moiety that alters the electrophoretic mobility of the released sequence and a moiety that can be used as an affinity label for rapid enrichment of cleavage products. In a multiplexed assay, different released e-tag reporters may be separated and detected providing for target identification. The probes comprise interactive functionalities adjacent the cleaved portion positioned in the probes such that the interactive functionality does not form part of the e-tag reporters. Also described are biopolymers and nucleosides containing such interactive functionalities.

IC ICM G01N
CC 3-1 (Biochemical Genetics)
IT **Antibodies** and Immunoglobulins
Antigens
Oligonucleotides
Receptors
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(for capture of labeled oligonucleotides; detection of nucleic acid sequences by hybridization and cleavage of hybrids to release sequences labeled with affinity and electrophoretic mobility tags)
IT 129451-79-2P 183601-38-9P 197925-39-6P 232946-83-7P 372170-39-3P
372170-40-6P 372170-41-7P 372170-44-0P 372170-45-1P 372170-46-2P

372170-47-3P 372489-37-7P 530159-47-8P 530159-48-9P 530159-51-4P
530159-52-5P 530159-53-6P 530159-55-8P 530159-57-0P 530159-58-1P
**530159-59-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reactions of; detection of nucleic acid sequences by hybridization and cleavage of hybrids to release sequences labeled with affinity and electrophoretic mobility tags)

IT 530159-49-0P **530159-50-3P**
RL: ARU (Analytical role, unclassified); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent)
(preparation of, as affinity label for probe capture; detection of nucleic acid sequences by hybridization and cleavage of hybrids to release sequences labeled with affinity and electrophoretic mobility tags)

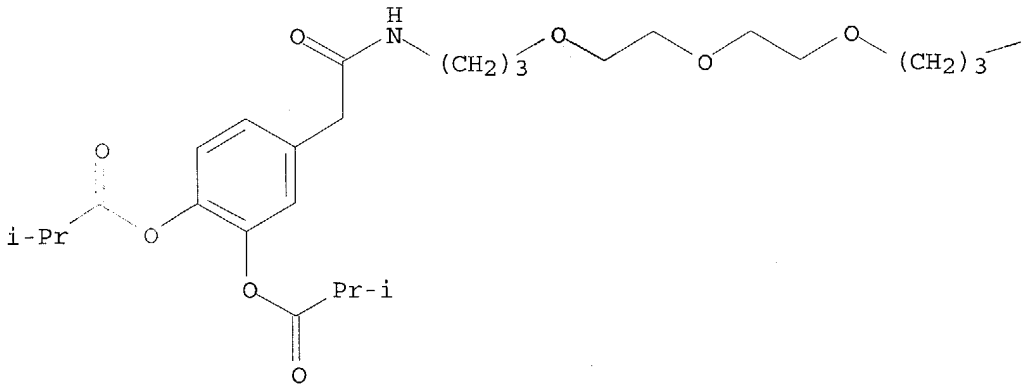
IT **530159-46-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as affinity label for probe capture; detection of nucleic acid sequences by hybridization and cleavage of hybrids to release sequences labeled with affinity and electrophoretic mobility tags)

IT **530159-59-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reactions of; detection of nucleic acid sequences by hybridization and cleavage of hybrids to release sequences labeled with affinity and electrophoretic mobility tags)

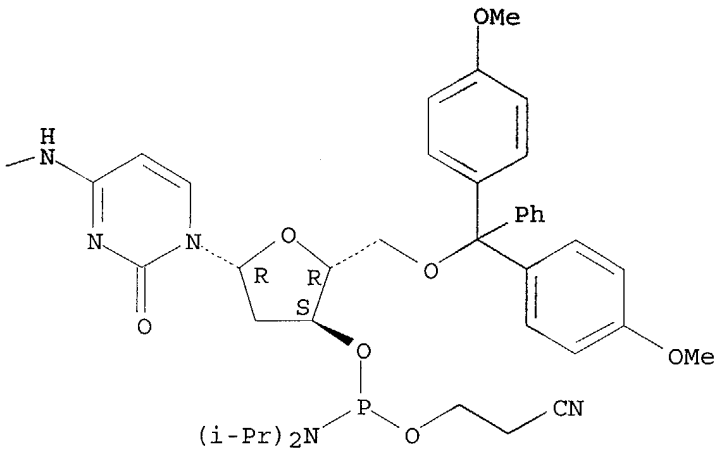
RN 530159-59-2 CAPLUS
CN Cytidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-N-[16-[3,4-bis(2-methyl-1-oxopropoxy)phenyl]-15-oxo-4,7,10-trioxa-14-azahexadec-1-yl]-2'-deoxy-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



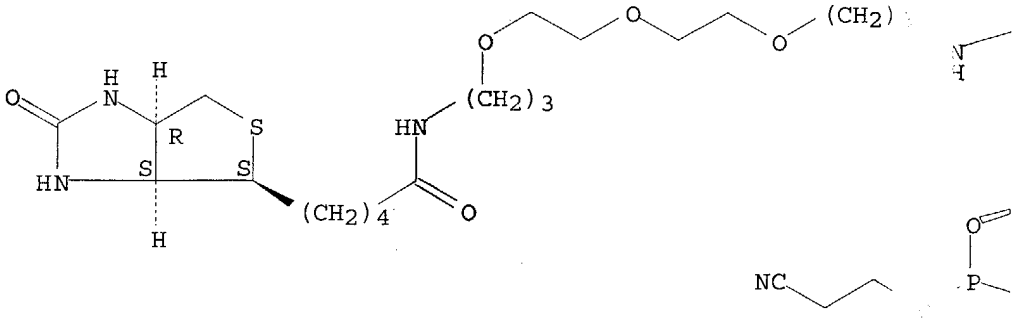
PAGE 1-B

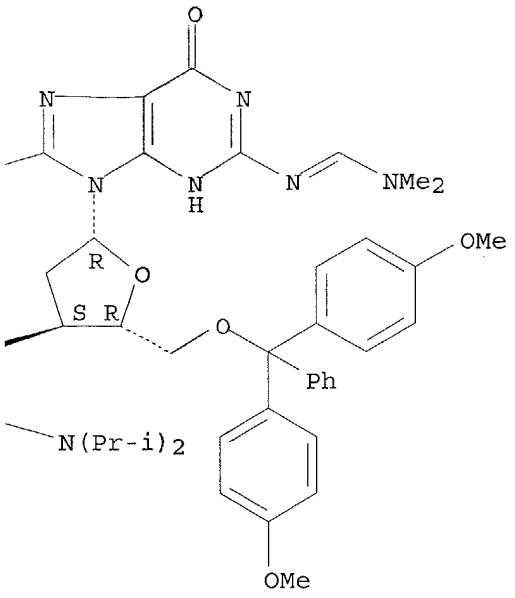


IT **530159-50-3P**
RL: ARU (Analytical role, unclassified); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent)
(preparation of, as affinity label for probe capture and detection of nucleic acid sequences by hybridization and cleavage of hybrids to release sequences labeled with affinity and electrophoretic mobility tags)
RN 530159-50-3 CAPLUS
CN Guanosine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-O-[(dimethylamino)methylene]-N-[(dimethylamino)methylene]-8-[[19-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-15-oxo-4,7,10-trioxa-14-azanonadec-1-yl]amino]-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A

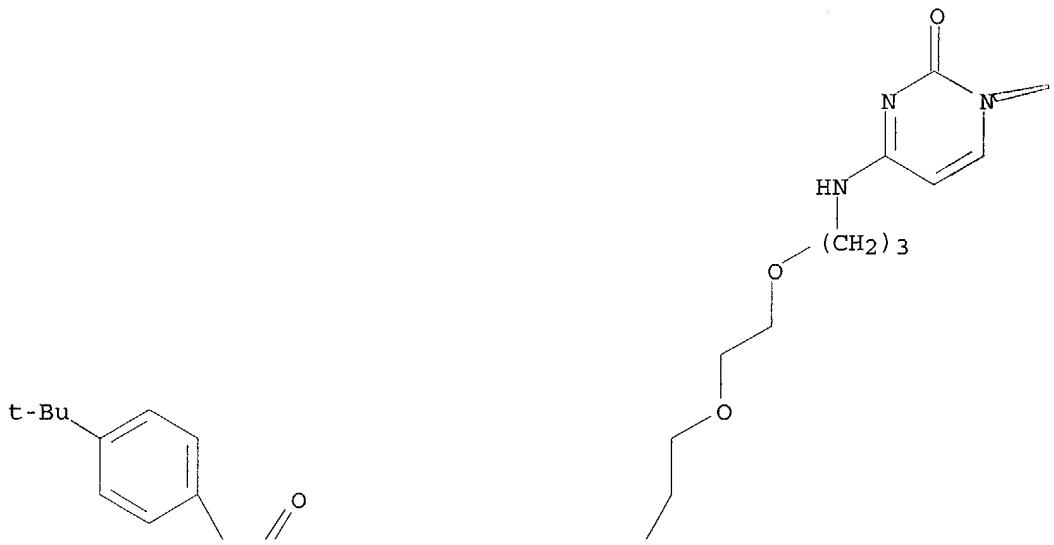




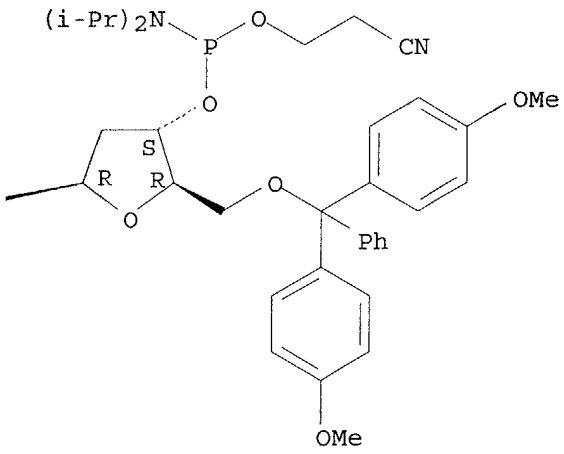

IT **530159-46-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as affinity label for probe capture; detection of nucleic acid sequences by hybridization and cleavage of hybrids to release sequences labeled with affinity and electrophoretic mobility tags)
RN 530159-46-7 CAPLUS
CN Cytidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-deoxy-N-[19-[(3aS,4S,6aR)-1-[4-(1,1-dimethylethyl)benzoyl]hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-15-oxo-4,7,10-trioxa-14-azanonadec-1-yl]-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

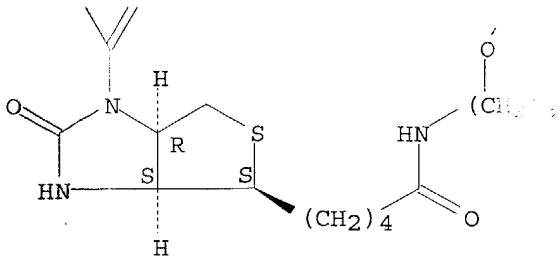
Absolute stereochemistry.

PAGE 1-A




PAGE 1-B





L8 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:376617 CAPLUS
DOCUMENT NUMBER: 138:397888
TITLE: Oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy
INVENTOR(S): Wengel, Jesper
PATENT ASSIGNEE(S): Exiqon A/S, Den.
SOURCE: PCT Int. Appl., [illegible] pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2003039523 | A2 | 20030515 | WO 2002-IB5080 | 20021105 |
| WO 2003039523 | A3 | 20031204 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: DK 2001-1640 A2 20011105
US 2001-337447P P 20011105

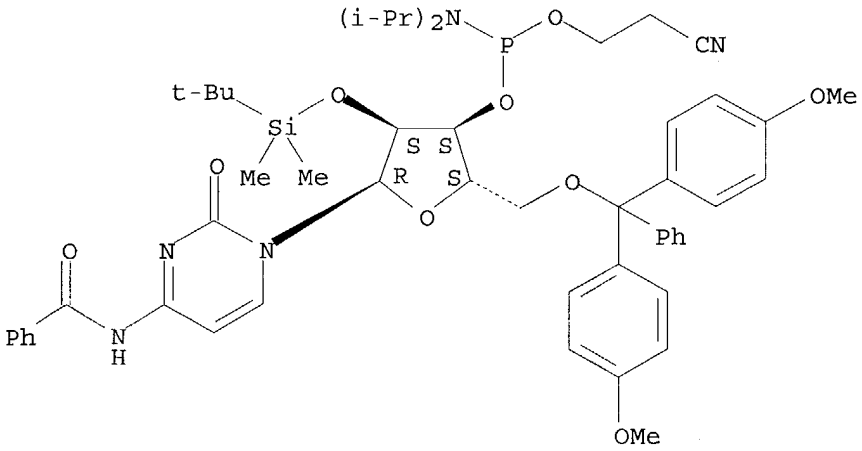
OTHER SOURCE(S): MARPAT 138:397888

AB The invention relates to novel α-L-RNA monomers, which, when incorporated into an oligonucleotide impair a higher tendency towards hybridization with a RNA complement, as compared to a DNA complement. The invention also relates to a process for the preparation of an α-L-RNA modified oligonucleotide and an intermediate for manufacturing the same. The novel oligonucleotides are useful for a variety of therapeutic, diagnostic, and general mol. biol. applications. Thus, oligonucleotides comprising α-L-RNA monomers sometimes exhibited lower hybridization tendencies with DNA than with RNA. The hybridization efficiency may be increased by incorporating LNA monomers into the oligonucleotide. Introduction of α-L-RNA monomers in oligonucleotides increased their resistance to nucleases.

IC ICM A61K009-70
ICS A61K009-20; A61K009-48

CC 6-2 (General Biochemistry)
Section cross-reference(s): 1, 33
IT **Antibodies** and Immunoglobulins
DNA
Enzymes, biological studies
Haptens
Peptide nucleic acids
Peptides, biological studies
Polysaccharides, biological studies
Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(complexes with α-L-ribonucleoside-containing oligonucleotides; oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)
IT 24259-58-3P 68354-70-1P 110237-79-1P 168103-01-3P 179239-79-3P
179239-80-6P 179239-81-7P 433934-28-2P 433934-30-6P 433934-31-7P
433934-32-8P 433934-33-9P 525596-13-8P 525596-14-9P 525596-15-0P
525596-16-1P 525596-17-2P 525596-18-3P 525596-19-4P
**525596-20-7P** 525596-21-8P 525596-22-9P 525596-23-0P
525596-24-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)
IT **525596-20-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(oligonucleotides containing α-L-ribonucleosides, their synthesis and use in diagnosis and therapy)
RN 525596-20-7 CAPLUS
CN Benzamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-O-[(1,1-dimethylethyl)dimethylsilyl]-α-L-ribofuranosyl]-1,2-dihydro-2-oxo-4-pyrimidinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L8 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:488242 CAPLUS
DOCUMENT NUMBER: 137:57592
TITLE: Antisense modulation of bh3 interacting domain death

agonist expressio
INVENTOR(S): Zhang, Hong; Wyat acqueline
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. P , 85 pp., Cont.-in-part of U. S. Ser. No. 657,346.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | PLICATION NO. | DATE |
|---|---|---|---|---|
| US 2002082228 | A1 | 20020627 | 2001-800631 | 20010307 |
| US 6503754 | B1 | 20030107 | 2000-657346 | 20000907 |
| WO 2002020547 | A1 | 20020314 | 2001-US27316 | 20010831 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA | | | B, BG, BR, BY, BZ, CA, CH, CN, | |
| CO, CR, CU, CZ, DE, DK, DM, DZ | | | C, EE, ES, FI, GB, GD, GE, GH, | |
| GM, HR, HU, ID, IL, IN, IS, JP | | | E, KG, KP, KR, KZ, LC, LK, LR, | |
| LS, LT, LU, LV, MA, MD, MG, MK | | | N, MW, MX, MZ, NO, NZ, PL, PT, | |
| RO, RU, SD, SE, SG, SI, SK, SL | | | J, TM, TR, TT, TZ, UA, UG, US, | |
| UZ, VN, YU, ZA, ZW, AM, AZ, BY | | | G, KZ, MD, RU, TJ, TM | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL | | | Z, TZ, UG, ZW, AT, BE, CH, CY, | |
| DE, DK, ES, FI, FR, GB, GR, IE | | | T, LU, MC, NL, PT, SE, TR, BF, | |
| BJ, CF, CG, CI, CM, GA, GN, GQ | | | W, ML, MR, NE, SN, TD, TG | |
| AU 2001088652 | A5 | 20020322 | 2001-88652 | 20010831 |
| EP 1328537 | A1 | 20030723 | 2001-968402 | 20010831 |
| R: AT, BE, CH, DE, DK, ES, FR, GB | | | R, IT, LI, LU, NL, SE, MC, PT, | |
| IE, SI, LT, LV, FI, RO, MK, CY | | | L, TR | |
| US 2003130222 | A1 | 20030710 | 2002-293783 | 20021113 |

PRIORITY APPLN. INFO.:

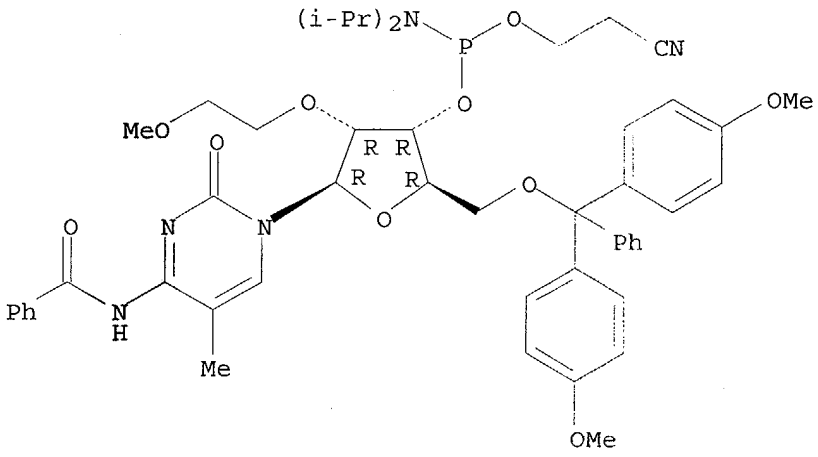
| | | |
|---|---|---|
| 2000-657346 | A2 | 20000907 |
| 2001-800631 | A | 20010307 |
| 2001-US27316 | W | 20010831 |

AB Antisense compds., compns. and methods e provided for modulating the expression of BH3 Interacting domain D n agonist. The compns. comprise antisense compds., particularly antise oligonucleotides, targeted to nucleic acids encoding BH3 Interacting main Death agonist. Methods of using these compds. for modulation of Interacting domain Death agonist expression and for treatment of diseas associated with expression of BH3 Interacting domain Death agonist are p ided.

IC ICM A61K048-00
ICS C07H021-04
NCL 514044000
CC 1-12 (Pharmacology)
Section cross-reference(s): 3
IT Fas antigen
RL: BSU (Biological study, unclassifie BIOL (Biological study)
(antibody; antisense modulation of interacting domain
death agonist expression for treatm of diseases)
IT **163759-94-2P** 212061-30-8P
RL: SPN (Synthetic preparation); PREP eparation)
(antisense modulation of bh3 intera ng domain death agonist
expression for treatment of disease
IT **163759-94-2P**
RL: SPN (Synthetic preparation); PREP eparation)
(antisense modulation of bh3 intera ng domain death agonist
expression for treatment of disease
RN 163759-94-2 CAPLUS
CN Cytidine, N-benzoyl-5'-O-[bis(4-methox enyl)phenylmethyl]-2'-O-(2-methoxyethyl)-5-methyl-, 3'-[2-cyanoet bis(1-

methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L8 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:185143 CAPLUS
DOCUMENT NUMBER: 136:257278
TITLE: Antisense modulation of BH3 interacting domain death agonist expression
INVENTOR(S): Zhang, Hong; Wyatt, Jacqueline R.
PATENT ASSIGNEE(S): Isis Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 171 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2002020547 | A1 | 20020314 | WO 2001-US27316 | 20010831 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 6503754 | B1 | 20030107 | US 2000-657346 | 20000907 |
| US 2002082228 | A1 | 20020627 | US 2001-800631 | 20010307 |
| AU 2001088652 | A5 | 20020322 | AU 2001-88652 | 20010831 |
| EP 1328537 | A1 | 20030723 | EP 2001-968402 | 20010831 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |

PRIORITY APPLN. INFO.:
US 2000-657346 A 20000907
US 2001-800631 A 20010307
WO 2001-US27316 W 20010831

AB Antisense compds., compns. and methods are provided for modulating the expression of BH3 Interacting domain Death agonist. The compns. comprise

antisense compds., particularly antisense oligonucleotides, targeted to nucleic acids encoding BH3 Interacting domain Death agonist. Methods of using these compds. for modulation of BH3 Interacting domain death agonist expression and for treatment of diseases associated with expression of BH3 Interacting domain death agonist are provided.

IC ICM C07H021-04
ICS A61K048-00; C12N015-00

CC 1-12 (Pharmacology)

IT Fas antigen
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**antibody**; antisense modulation of BH3 interacting domain death agonist expression)

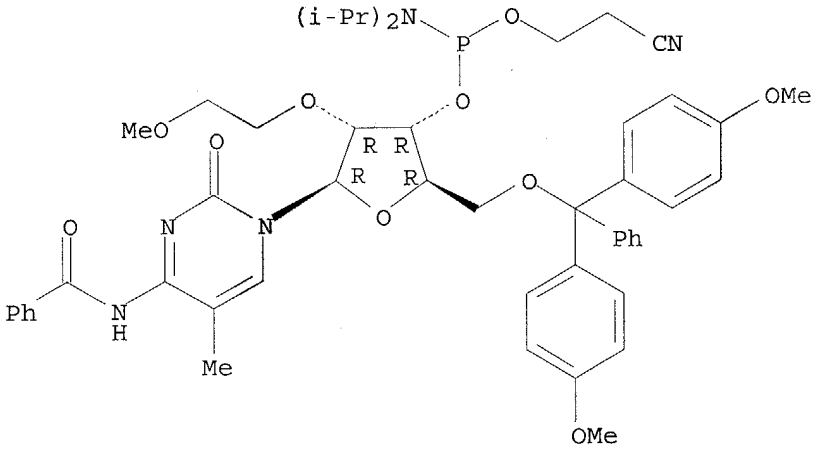
IT **163759-94-2P** 212061-30-8P 278188-65-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(antisense modulation of BH3 interacting domain death agonist expression)

IT **163759-94-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(antisense modulation of BH3 interacting domain death agonist expression)

RN 163759-94-2 CAPLUS

CN Cytidine, N-benzoyl-5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-O-(2-methoxyethyl)-5-methyl-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.




REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:816683 CAPLUS
DOCUMENT NUMBER: 135:353710
TITLE: eTag reporter compounds for oligonucleotide and protein labeling and identification
INVENTOR(S): Singh, Sharat; Matray, Tracy; Salinmi-moosavi, Hussein
PATENT ASSIGNEE(S): Aclara Biosciences, Inc., USA
SOURCE: PCT Int. Appl., 95 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 21

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2001083502 | A1 | 20011108 | WO 2000-US29724 | 20001027 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 6682887 | B1 | 20040127 | US 2000-561579 | 20000428 |
| US 6514700 | B1 | 20030204 | US 2000-602586 | 20000621 |
| EP 1278760 | A1 | 20030129 | EP 2000-973963 | 20001027 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | | | | |
| JP 2003532092 | T2 | 20031028 | JP 2001-580926 | 20001027 |
| JP 3566255 | B2 | 20040915 | | |

| PRIORITY APPLN. INFO.: | | |
|---|---|---|
| US 2000-561579 | A | 20000428 |
| US 2000-602586 | A | 20000621 |
| US 1999-303029 | A2 | 19990430 |
| WO 2000-US29724 | W | 20001027 |

AB Families of compns. are provided as labels, referred to as eTag reporters, for attaching to polymeric compds. and assaying based on release of the eTag reporters from the polymeric compound and separation and detection. For oligonucleotides, the eTag reporters are synthesized at the end of the oligonucleotide by using phosphite or phosphate chemical, whereby mass-modifying regions, charge-modifying regions, and detectable regions are added sequentially to produce the eTag labeled reporters. By using small building blocks and varying their combination large nos. of different eTag reporters can be readily produced attached to the oligonucleotide of interest for identification. Protocols are used that release the eTag reporter when the target sequence is present in the sample. Thus, the synthesis of biotin-labeled nucleotide phosphoramidate eTag compds. and the application of such eTags in hybridization and PCR procedures was described. Application of eTags to protein labeling was also presented.

IC ICM C07H021-00
ICS C07B061-00; C12Q001-68

CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 9

IT **Antibodies**
Ligands
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(eTag-labeled; eTag reporter compds. for oligonucleotide and protein labeling and identification)

IT 14985-44-5P, 8-Bromo-2'-deoxyadenosine 64911-18-8P 129451-79-2P
183601-38-9P 197925-39-6P 232946-83-7P 372170-39-3P 372170-40-6P
372170-41-7P 372170-42-8P **372170-43-9P** 372170-44-0P
372170-45-1P 372170-46-2P 372170-47-3P 372170-48-4P 372489-37-7P
372489-38-8P 372489-39-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(eTag reporter compds. for oligonucleotide and protein labeling and identification)

IT **372170-43-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

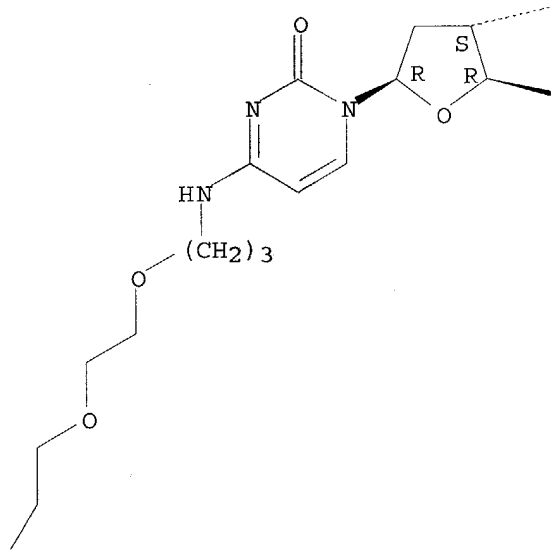
(Reactant or reagent)
(eTag reporter compds. for oligonucleotide and protein labeling and identification)

RN 372170-43-9 CAPLUS

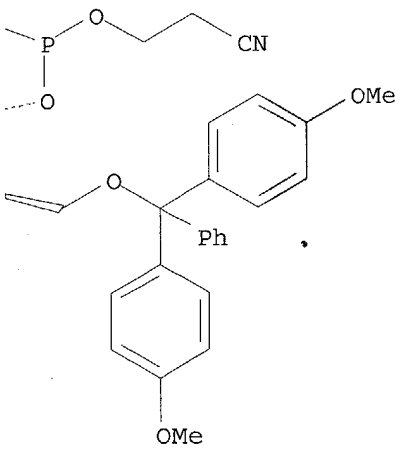
CN Cytidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-deoxy-N-[19-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-15-oxo-4,7,10-trioxa-14-azanondec-1-yl]-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

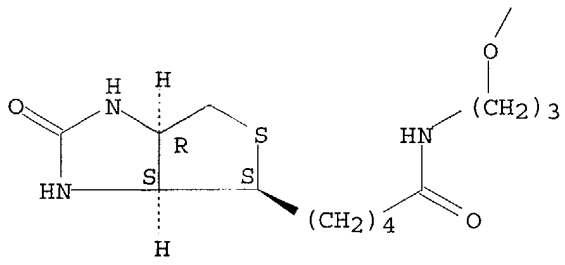
Absolute stereochemistry.

PAGE 1-A




PAGE 1-B





REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:499854 CAPLUS
DOCUMENT NUMBER: 135:102556
TITLE: Antisense modulation of integrin α4 expression
INVENTOR(S): Bennett, C. Frank; Condon, Thomas P.; Cowsert, Lex M.
PATENT ASSIGNEE(S): Isis Pharmaceuticals, Inc., USA
SOURCE: U.S., 49 pp., Cont.-in-part of U.S. 5,968,826.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 6258790 | B1 | 20010710 | US 1999-377309 | 19990819 |
| US 5968826 | A | 19991019 | US 1998-166203 | 19981005 |
| PRIORITY APPLN. INFO.: | | | US 1998-166203 A2 | 19981005 |

AB Compns. and methods are provided for modulating the expression of integrin α4. Antisense compds., particularly antisense oligonucleotides, targeted to nucleic acids encoding integrin α4 are preferred. Methods of using these compds. for modulating integrin α4 expression and for treatment of diseases associated with expression of integrin α4 are also provided. Mice were treated with ISIS 17044 [CCG(CAGCCATGC)GCTCTTGG (inside parentheses: phosphorothioate; outside parentheses: 2'-MOE/deoxy, all 2'-MOE C's are 5 meC)], at daily doses ranging from 1 mg/kg to 20 mg/kg, injected s.c., beginning one day before immunization with p13 peptide of proteolipid protein (which induces mouse exptl. autoimmune encephalomyelitis). 17044 Reduced disease severity or delayed disease onset.

IC ICM C12N005-00
ICS C12N005-08; A61K031-7105; A61K031-7125; L07H024-00
NCL 514044000
CC 1-7 (Pharmacology)
Section cross-reference(s): 3, 9, 15, 63
IT Cell adhesion molecules
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(VCAM-1, **antibody** to, cell adhesion inhibition by antisense oligonucleotide and; antisense modulation of integrin α4 expression)
IT **Antibodies**
RL: BAC (Biological activity or effector, except adverse); BPR (Biological

process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(to VCAM-1, cell adhesion inhibition by antisense oligonucleotide and; antisense modulation of integrin α4 expression)

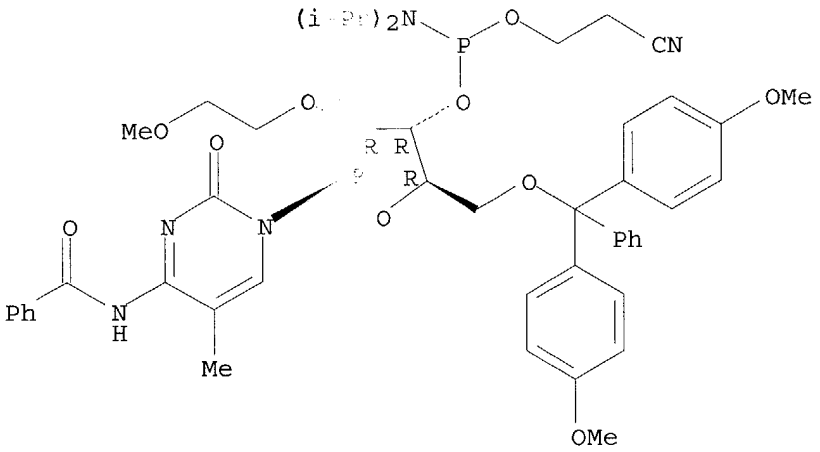
IT **163759-94-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(antisense modulation of integrin α4 expression)

IT **163759-94-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(antisense modulation of integrin α4 expression)

RN 163759-94-2 CAPLUS

CN Cytidine, N-benzoyl-5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-O-(2-methoxyethyl)-5-methyl-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.




REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:319733 CAPLUS
DOCUMENT NUMBER: 134:336234
TITLE: Modulation of L-selectin shedding via inhibition of tumor necrosis factor-α-converting enzyme (TACE)
INVENTOR(S): Bennett, C. Frank; Kishimoto, Takashi Kei
PATENT ASSIGNEE(S): Isis Pharmaceuticals, Inc., USA; Boehringer Ingelheim Pharmaceuticals, Inc.
SOURCE: PCT Int. Appl., 65 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2001030360 | A1 | 20010503 | WO 2000-US29219 | 20001023 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,

SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6632667 B1 20031014 US 1999-429096 19991028
PRIORITY APPLN. INFO.: US 1999-429096 A 19991028

AB The invention provides methods of modulating the shedding of L-selectin in cells or tissues using an inhibitor of TACE expression or activity. Antisense oligonucleotides targeted to nucleic acids encoding TACE are preferred forms of TACE inhibitors. These methods are believed to be useful both therapeutically and diagnostically and as research tools. The invention further comprises methods of treating conditions associated with altered L-selecting shedding or altered L-selectin levels.

IC ICM A61K031-70
ICS A01N043-04; C07H021-04; C12N005-00; C12N005-02

CC 1-12 (Pharmacology)
Section cross-reference(s): 33

IT **Antibodies**
Antisense oligonucleotides
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(L-selectin shedding modulation via inhibition of tumor necrosis factor-α-converting enzyme (TACE))

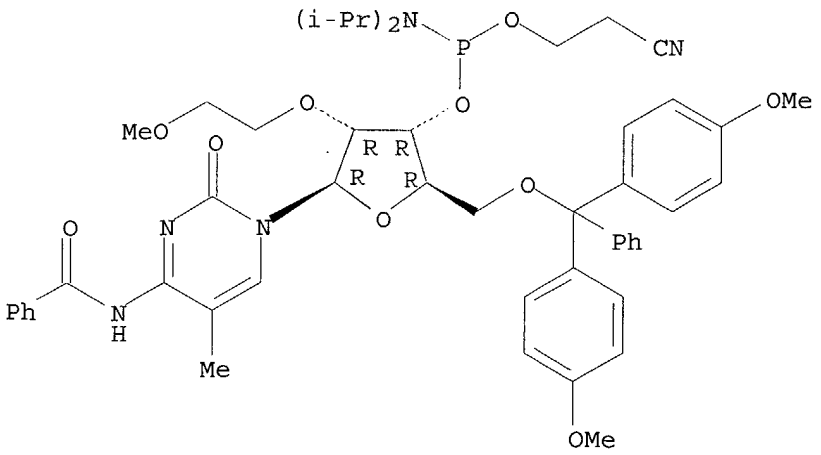
IT **163759-94-2P** 212061-30-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(L-selectin shedding modulation via inhibition of tumor necrosis factor-α-converting enzyme (TACE))

IT **163759-94-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(L-selectin shedding modulation via inhibition of tumor necrosis factor-α-converting enzyme (TACE))

RN 163759-94-2 CAPLUS

CN Cytidine, N-benzoyl-5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-O-(2-methoxyethyl)-5-methyl-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.




REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:401847 CAPLUS
DOCUMENT NUMBER: 133:38231
TITLE: Methods of modulating tumor necrosis factor α-induced expression of cell adhesion molecules
INVENTOR(S): Monia, Brett P.; Xu, Xiaoxing S.
PATENT ASSIGNEE(S): Isis Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 100 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2000034303 | A1 | 20000615 | WO 1999-US28965 | 19991208 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 6114517 | A | 20000905 | US 1998-209668 | 19981210 |
| EP 1137658 | A1 | 20011004 | EP 1999-961953 | 19991208 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| JP 2002531574 | T2 | 20020924 | JP 2000-586746 | 19991208 |
| PRIORITY APPLN. INFO.: | | | US 1998-209668 A | 19981210 |
| | | | WO 1999-US28965 W | 19991208 |

AB Methods are provided for inhibiting the expression of cell adhesion mols. using inhibitors of signaling mols. involved in human TNF-α signaling. These inhibitors include monoclonal antibodies, peptide fragments, small mol. inhibitors, and, preferably, antisense oligonucleotides. Methods for treatment of diseases, particularly inflammatory and immune diseases, associated with overexpression of cell adhesion mols. are provided.

IC ICM C07H021-04
ICS C07H021-02; C12Q001-68; A61K048-00

CC 1-7 (Pharmacology)
Section cross-reference(s): 33

ST TNF cell adhesion mol expression modulation; antisense oligonucleotide adhesion mol expression modulation; monoclonal antibody adhesion mol expression modulation; peptide adhesion mol expression modulation; inflammation antisense oligonucleotide TNF signaling; immune disease antisense oligonucleotide TNF signaling

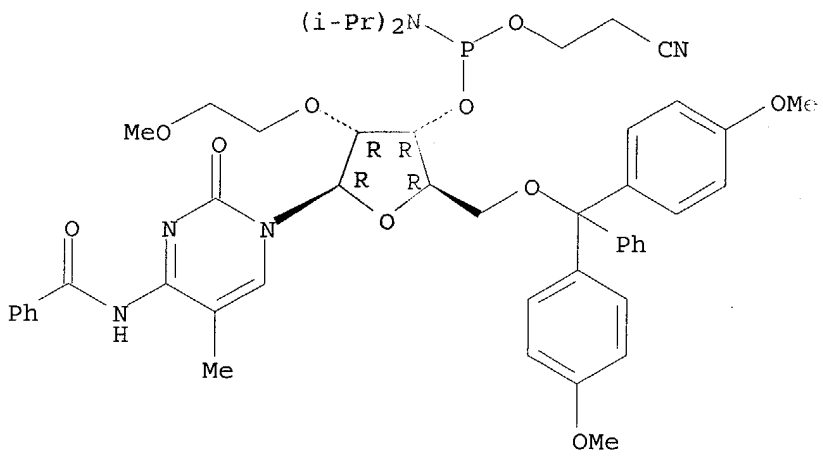
IT **163759-94-2P** 212061-30-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(modulation of TNF-α-induced expression of cell adhesion mols.)

IT **163759-94-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(modulation of TNF-α-induced expression of cell adhesion mols.)

RN 163759-94-2 CAPLUS

CN Cytidine, N-benzoyl-5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-O-(2-methoxyethyl)-5-methyl-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.




REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1991:675250 CAPLUS
DOCUMENT NUMBER: 115:275250
TITLE: Heat treatment in method for detecting a specific nucleic acid sequence in a cell sample, such as from blood
INVENTOR(S): Frostell, Asa; Nunn, Michael F.
PATENT ASSIGNEE(S): Pharmacia Genetic Engineering, Inc., USA
SOURCE: PCT Int. Appl., 71 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9108308 | A1 | 19910613 | WO 1990-US6953 | 19901129 |
| W: JP | | | | |
| RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE | | | | |
| EP 504278 | A1 | 19920923 | EP 1991-901361 | 19901129 |
| EP 504278 | B1 | 19970115 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE | | | | |
| JP 05504475 | T2 | 19930715 | JP 1991-501746 | 19901129 |
| AT 147792 | E | 19970215 | AT 1991-901361 | 19901129 |
| PRIORITY APPLN. INFO.: | | | US 1989-443910 | 19891130 |
| | | | US 1990-505833 | 19900406 |
| | | | US 1990-548027 | 19900705 |
| | | | WO 1990-US6953 | 19901129 |

AB In detecting a specific nucleic acid sequence contained in a blood sample, cells containing the genomic DNA are isolated and placed in an aqueous medium of <80 mg extracellular protein/mL and subjected to ≥105° for ≥ 5 min. The method can be combined with a polymerase chain reaction (PCR) method to provide a simple and rapid procedure for detecting the nucleic acid sequence. Typically, the heat treatment is

accomplished by autoclaving the isolated cells for a temperature and time sufficient to sterilize the sample. In preferred embodiments, the heat treatment is performed in the presence of nucleic acid primers, so that the released nucleic acid, which is denatured into single stands during the heat treatment, will hybridize to the primers on cooling. Also described is the synthesis of an amino-modified deoxycytidine phosphoramidite for use in preparation of biotinylated and Eu-chelate-labeled oligonucleotides for use in assays for retrovirus detection. Thus cell line COS-10-11.1 was produced for human immunodeficiency virus (HIV)-pos. control cells; the cell line contained a single intact copy of an HIV-1 genome containing a mutation rendering virus replication-incompetent. When the cells were subjected to the DNA isolation method of the invention followed by PCR and detection with hybridization probes, the assay system was sensitive enough to detect HIV in as few as 5 cells from a background of 1,000,000. The assay was approx. linear in the range 5-40 COS-10-11.1 cells per million of background cells. Detection of HIV-1 in clin. lymphocyte samples is described, as is detection of HIV-2 and human T-cell lymphotropic virus-I and -II.

IC ICM C12Q001-68
ICS C07H015-12; C12N015-00

CC 9-9 (Biochemical Methods)
Section cross-reference(s): 3, 33

IT Receptors
RL: ANST (Analytical study)
(for CD4 or other blood cell-surface receptor, **antibody** to, in blood cell isolation for nucleic acid sequence detection)

IT **Antibodies**
RL: ANST (Analytical study)
(to CD4 or other blood cell-surface receptor, in blood cell isolation for nucleic acid sequence detection)

IT Antigens
RL: ANST (Analytical study)
(CD2, receptor for, **antibody** to, in blood cell isolation for nucleic acid sequence detection)

IT Antigens
RL: ANST (Analytical study)
(CD3, receptor for, **antibody** to, in blood cell isolation for nucleic acid sequence detection)

IT Antigens
RL: ANST (Analytical study)
(CD4, receptor for, **antibody** to, in blood cell isolation for nucleic acid sequence detection)

IT Antigens
RL: ANST (Analytical study)
(CD8, receptor for, **antibody** to, in blood cell isolation for nucleic acid sequence detection)

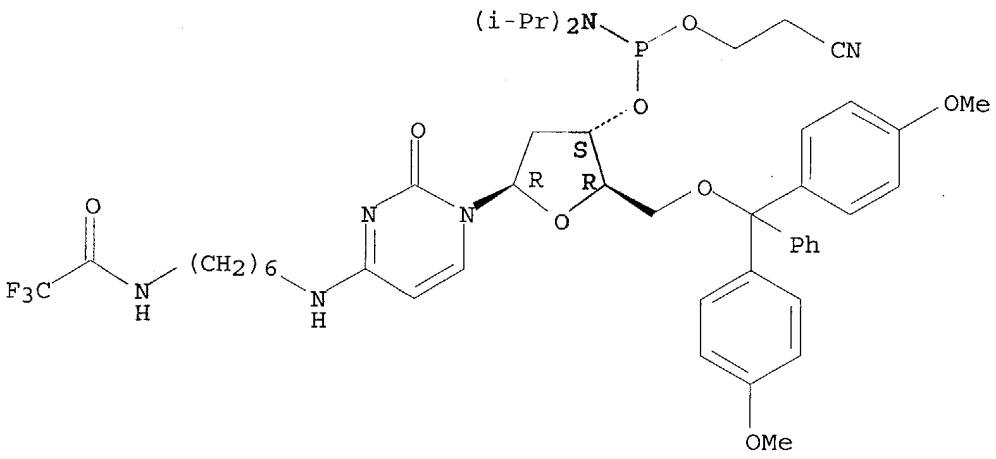
IT **120682-00-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, for oligonucleotide primer and probe preparation for retrovirus nucleic acid detection)

IT **120682-00-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, for oligonucleotide primer and probe preparation for retrovirus nucleic acid detection)

RN 120682-00-0 CAPLUS

CN Cytidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-deoxy-N-[6-[(trifluoroacetyl)amino]hexyl]-, 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI) (CA INDEX NAME)

Absolute stereochemistry.




=>